

New or little-known Tipulidae from Southeastern Africa. Part I.*

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(Submitted through B. R. Stuckenberg, Natal Museum, Pietermaritzburg.).

In the present report, I am describing some of the new species of crane-flies that were taken at Salisbury, Southern Rhodesia, by Mr. Courtenay N. Smithers, together with one further species from Luabo, Portuguese East Africa, secured by Miss Pamela J. Usher. I am greatly indebted to the collectors for the privilege of retaining the types of the novelties in my extensive collection of World Tipulidae.

***Nephrotoma smithersiana* n.sp.** Figs. 1 and 11.

Size medium (wing 12 mm. or less); general coloration orange and black; antennae of male elongate, flagellum black, segments very strongly incised, the basal swellings more developed than the outer ones; femoral tips blackened, most extensively so on the fore legs; wings whitish subhyaline, costal border narrowly infuscated; abdomen, excepting the base and apex, dark brown; male hypopygium with the tergal lobes each with a pair of spiculate lobules; inner dististyle with the dorsal crest high, pale, the posterior half of margin with microscopic setulae.

Male. Length about 10—11 mm.; wing 10.5—12 mm.; antenna about 7—7.5 mm.

Female. Length about 10—11 mm.; wing 11—11.5 mm.

Frontal prolongation of head polished yellow, restrictedly blackened above; palpi black. Antennae of male elongate, about two-thirds the wing; scape short, brown, pedicel brownish black, flagellum black; flagellar segments very strongly incised, the basal swelling shorter and more developed than the outer one; segments clothed with an abundant erect black pubescence, the inconspicuous verticils a little longer; in the female, antennae short,

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flagellar segments simple. Head orange, paling to yellow on genae and lower surface; sides of vertical tubercle weakly darkened; occipital brand moderately large, triangular, castaneous, the margins ill-delimited.

Pronotal scutum fulvous, darker on sides, scutellum more yellowed; pretergites light yellow. Mesonotal praescutum with three polished black stripes, the interspaces reddish brown, humeral region light yellow; lateral stripes widened anteriorly but not reaching the margin; scutal lobes black or brownish black, the central area yellow; scutellum brown, parascutella yellow; mediotergite light yellow, margined posteriorly with reddish brown; pleurotergite yellow, the ventral part reddened. Pleura yellow dorsally, the mesepisternum, especially the sternopleurite, darker; pteropleurite yellow. Halteres with stem obscure yellow, knob darkened. Legs with coxae and trochanters yellow; femora obscure yellow basally, the outer ends broadly black, on fore legs involving about the outer two-thirds, mid-legs the outer half, hind legs the outer third or slightly more, in the female the black femoral tips more extensive, remainder of legs black; claws of male toothed. Wings (Fig. 1) whitish subhyaline, the costal border narrowly infuscated, including the darker cells *C* and *Sc*, with the stigma; distal ends of outer radial cells more weakly darkened; veins light brown, darker in the patterned areas. No trichia in outer cells; stigma glabrous or with very few trichia. Venation: Cell M_1 with petiole variable in length, in cases three-fourths the length of *m*, in others sessile.

Abdomen obscure yellow, tergites beyond the second patterned with brown, in cases more extensively so to include virtually the whole abdomen with the exception of the small yellow hypopygium and preceding segment; sternites dark brown. Ovipositor with cerci long and very slender, straight, tips subacute. Male hypopygium (Fig. 11) with the tergite, *t*, transverse, narrowed outwardly, the posterior border gently emarginate, with a small median U-shaped notch; each lateral lobe with a pair of lobules that are provided with blackened spinules. Outer dististyle, *d*, long and narrow, about five times as long as broad; inner style with the beak relatively slender, lower beak blackened and produced into a single acute black point; region of outer basal lobe without spines; dorsal crest high, extended forward nearly to end of beak, the outer margin pale, its posterior half with microscopic setulae. Gonapophysis, *g*, appearing as a pale flattened blade, exceeding the aedeagus in length, the tip obtuse. Eighth sternite broad, posterior border very gently emarginate, the central area pale; setae of the scarcely developed lobes inconspicuous, relatively short and few in number.

Holotype, ♂, Salisbury, Southern Rhodesia, April 3, 1957 (Smithers). *Allotopotype*, ♀, pinned with type. *Paratopotypes* 10 ♂ ♀, April 17—May 30, 1956, March 29—April 12, 1957 (Smithers).

This interesting new *Nephrotoma* is named in honor of Mr. Courtenay N. Smithers, to whom we are indebted for many interesting crane-flies from Southern Rhodesia. The other regional species with elongate male antennae include *Nephrotoma antennata* (Wiedemann) and *N. moshesh* Alexander,

which differ in body coloration, structure of the antennae, pattern of wings, and especially the structure of the male hypopygium, particularly the tergite and inner dististyle.

Limonia (Limonia) hovamendica makalaka n.subsp. Figs. 2 and 12.

General coloration of mesonotal praescutum yellow, with a conspicuous brown central stripe; pleura obscure yellow, striped with brown; femora yellow basally, passing into dark brown, the tips narrowly white; wings weakly tinged with brown, stigma darker brown; *Sc* long; abdominal tergites bicolored; male hypopygium with the tergite unusually glabrous; basistyle with the ventromesal lobe unusually long; ventral dististyle irregularly bilobed, the rostral prolongation a blackened corrugated spine; gonapophysis a powerful black horn; aedeagus bifid at apex.

Male. Length about 6.5–6.6 mm.; wing 7–7.2 mm.; antenna about 1.6–1.7 mm.

Rostrum and palpi black. Antennae black, scape paler at tip; flagellar segments oval, with short glabrous apical necks, nearly as long as the longest verticils. Head dark grey; anterior vertex reduced to a narrow strip.

Pronotum brown above, paling to obscure yellow on sides, scutellum yellowed. Mesonotal praescutum yellow, with a conspicuous brown central stripe, more intense on anterior half; lateral stripes paler, very broad, extending to the lateral borders; scutal lobes brownish yellow; posterior sclerites of notum darker, scutellum paler at base. Pleura obscure yellow, variegated by brown, including a dorsal area from and including the fore coxae backward to the pleurotergite, with a second area on the ventral sternopleurite. Halteres with stem yellow, knob infuscated. Legs with coxae pale, fore pair darkened; trochanters yellow; femora yellow, deepening outwardly to dark brown, the tip narrowly and abruptly whitened; tibiae and tarsi dark brown; claws long and slender, with a single very slender spine. Wings (Fig. 2) weakly tinged with brown; stigma oval, darker brown; prearcular and costal fields more yellowed; very narrow to scarcely indicated darkened seams at origin of *Rs* and over the cord; extreme outer ends of cells *R*₂ and *R*₃ infuscated; veins brown, a little paler in the brightened fields. Venation; *Sc* long, *Sc*₁ ending beyond two-thirds the length of the strongly arcuated *Rs*; *Sc*₂ longer than *Sc*₁; cell 1st *M*₂ rectangular, longer than the distal section of vein *M*₃; *m-cu* at fork of *M*.

Abdominal tergites bicolored, brown, the posterior borders narrowly obscure yellow, sternites more uniformly yellow; eighth and ninth segments pale, the appendages of the hypopygium darker. Male hypopygium (Fig. 12) with the tergite, *t*, about as long as the width at base, gradually narrowed outwardly, the apex truncated or virtually so; surface apparently without setae. Basistyle, *b*, with ventromesal lobe basal in position, very long, cylindrical; mesal face of style with a compact group of strong yellow bristles, with other more scattered setae; base and apex of style unusually destitute of

setae. Dorsal dististyle, *d*, a small curved blackened rod, enlarged before the acute tip; ventral style irregularly bilobed, the smaller outer lobe again divided into two unequal lobules; major lobe or body of style produced into a long slender blade that tapers into a blackened spine, the surface microscopically corrugated, on face of style with a further paler blade. Gonapophysis *g*, very strong and powerful, appearing as a curved black horn, the tip acute. Aedeagus bifid at tip.

Holotype, ♂, Salisbury, Southern Rhodesia, January 20, 1957 (Smithers). *Paratopotype*, a broken ♂, March 7, 1957.

The present fly is most readily distinguished from the typical *hovamendica* Alexander, of Madagascar, by slight differences in the male hypopygium, especially in the more slender gonapophyses.

***Limonia (Rhipidia) femorasetosa taeniola* n.subsp.**

Male. Length about 5.5 mm.; wing 6 mm.

Characters generally as in *femorasetosa* Alexander, differing in certain regards. Legs broken and the arrangement of modified setae on the femora cannot be stated. Wings with *Sc* short, *Sc*₁ ending shortly beyond origin of *Rs*, about opposite one-fifth the length. Male hypopygium with the three rostral spines arranged in a linear row, contiguous; rostrum beyond the spines stout, the lower apical part produced into a triangular point, at its base above with two strong setae.

Holotype, ♂, Salisbury, Southern Rhodesia, January 20, 1957 (Smithers).

***Orimarga (Orimarga) mashonensis* n.sp. Fig. 3.**

Head grey; mesonotum almost uniformly dark plumbeous, pleura reddish yellow; legs medium brown, the tips of the femora and tibiae, with the outer tarsal segments, darker; wings subhyaline, unpatterned; vein *R*₁₊₂ unusually long, approximately one and one-half to two times *R*₂.

Female. Length about 6.5—7 mm.; wing 6—7 mm.

Rostrum reddened; palpi black. Antennae black, the base of scape narrowly reddened; flagellar segments oval, the terminal one shortest; segments slightly exceeding the verticils. Head grey.

Cervical region light brown. Pronotum brownish grey above, the sides, with the pretergites, obscure yellow. Mesonotum almost uniformly dark plumbeous, the posterior sclerites more grey pruinose; pleurotergite and pleura more reddish yellow, dorsopleural region weakly darkened. Halteres with stem pale, knob weakly darkened. Legs with coxae and trochanters reddish yellow; remainder of legs light to medium brown, outer tarsal segments, with the tips of femora and tibiae, darker. Wings (Fig. 3) subhyaline, unpatterned, the prearcular and costal fields vaguely more yellowed; veins brown, more brownish yellow in the costal region. Veins beyond level of

m-cu with strong macrotrichia, lacking on *Cu* and the Anals. Venation: Sc_1 ending nearly opposite the fork of R_s , Sc_2 near its tip; free tip of Sc_2 faint but preserved; R_{1+2} unusually long, approximately one and one-half to twice R_2 , with strong trichia; *r-m* slightly oblique, pale; M_{3+4} and M_4 subequal or the former a little longer; *m-cu* about opposite midlength of R_s .

Abdominal tergites dark brown, sternites and genital segment more brownish yellow.

Holotype, ♀, Salisbury, Southern Rhodesia, February 19, 1957 (Smithers). *Paratopotypes*, 3 ♀ ♀, March 19—28, 1957.

This is the first record of the genus from Southern Africa. By my key to the species of *Orimarga* (Ruwenzori Expedition 1934—35 (Brit. Mus. Nat. Hist.), Tipulidae, 1, no. 7; 256; 1956), the fly runs to *Orimarga* (*Orimarga*) *fryeri* Edwards, of the Seychelles Islands, which differs in coloration and in details of venation. The free tip of Sc_2 , preserved in the present fly is lacking in the other species so far made known from Continental Africa.

Hexatoma (Eriocera) shawanoensis n.sp. Fig. 4.

Allied to *tumidiscapa*; general coloration of mesonotal praescutum grey, with four poorly indicated light brown stripes; antennae of male very long, approximately three times the wing; femora brown, the outer ends paling to brownish yellow; wings whitish subhyaline, restrictedly darker patterned; veins unusually glabrous; vein R_2 beyond fork of R_{2+3+4} , leaving a short element R_{2+3} ; abdomen brownish yellow, with a more or less distinct central brown vitta, outer segments darker brown.

Male. Length about 11 mm.; wing 14 mm.; antenna about 42 mm.

Rostrum reduced, light brown; palpi brownish yellow, terminal segment blackened. Antennae of male very long, approximately three times the wing; scape fulvous, pedicel small, testaceous; flagellum black, the extreme base of the first segment obscure yellow; flagellar segments progressively lengthened outwardly, the second about one and one-half times the first; emergence spines virtually to end of organ, more numerous on the proximal segments. Head fulvous, more infuscated posteriorly and beneath; vertical tubercle very large, entire.

Pronotum brownish grey. Mesonotal praescutum grey, with four poorly indicated light brown stripes; vestiture of praescutum long and conspicuous, white, erect; scutum and scutellum dark grey, the former with the lobes vaguely more darkened; postnotum reddish brown, clearer posteriorly. Pleura dark brown, grey pruinose; dorsopleural membrane dark. Halteres with stem pale yellow, knob dark brown. Legs with coxae dark brown, sparsely pruinose, middle coxae paler; trochanters brownish yellow; femora brown, the outer ends paling to brownish yellow; tibiae and tarsi brown, the outer segments of the latter black; posterior tibiae with long conspicuous setae. Wings (Fig. 4) whitish subhyaline, restrictedly darker patterned; cells *C*

and Sc pale brown; stigmal area very small; most veins seamed with brown, least conspicuous on the outer medial branches; veins brown. Veins beyond cord unusually glabrous, distal section of R_5 with a series of small trichia. Venation: R_2 beyond fork of R_{2+3+4} , leaving a short element R_{2+3} ; veins R_3 and R_4 divergent, cell R_2 at margin only a trifle more extensive than cell R_3 ; M_{3+4} almost as long as M_4 ; $m-cu$ at fork of M ; a conspicuous spur near first angle of vein M_{1+2} , jutting into cell R .

Abdomen brownish yellow, segments with a more or less distinct central brown vitta; outer segments, especially the hypopygium and preceding segments, darker brown.

Holotype, ♂, Shawanoe River, Southern Rhodesia, January 27, 1957 (Smithers).

The most similar regional species is *Hexatoma (Eriocera) preposita* Alexander, of Natal and Southern Rhodesia, which similarly has greatly lengthened antennae in the male, differing in the coloration of the body and legs, especially the conspicuously blackened femoral tips. The position of vein R_2 beyond the fork of R_{2+3+4} in the present fly is presumed to be a constant character. The three species, *H. (E.) preposita*, *H. (E.) tumidiscapa* (Alexander), and the present fly, all have the wing veins unusually glabrous.

Trentepohlia (Trentepohlia) pamela n.sp. Fig. 5.

Allied to *trentepohlii*; general coloration of thorax brownish yellow; legs yellow, tips of tibiae and outer tarsal segments darker; wings subhyaline, with a very pale brown pattern; prearcular and costal fields, including the region of the stigma, clearer yellow; costal fringe of male long and conspicuous; abdomen reddish brown, outer segments brownish black.

Male. Length about 5.5–5.7 mm.; wing 5–5.5 mm.

Female. Length about 7–7.3 mm.; wing 5.8–6 mm.

Rostrum light yellow, labial palpi light brown, maxillary palpi black. Antennae with scape brown, the remainder dark brown; flagellar segments long-subcylindrical, subequal to the longest verticils. Head very dark grey; anterior vertex reduced to a narrow line, carinate, the ridge continued backward to the occiput.

Pronotum weakly infuscated, sides more yellowed. Mesonotum almost uniformly brownish yellow, surface subnitidous, nearly glabrous; scutellum and postnotum somewhat darker. Pleura brownish yellow above, clearer yellow ventrally. Halteres obscure yellow. Legs with coxae and trochanters yellow; remainder of legs yellow, tips of tibiae narrowly darkened, outer tarsal segments blackened; posterior tibiae on outer face before tips in both sexes with two or three elongate black bristles. Wings (Fig. 5) with the ground subhyaline, prearcular and costal fields, with the stigmal region, clearer yellow; a very weak darkened pattern, including the wing tip in cells R_4 to M_2 inclusive; narrow darker seams along posterior cord, vein R_3 , and

along vein *Cu* in cell *M*; veins light brown, darker in the patterned areas, light yellow in the costal field. Costal fringe of male long and conspicuous, of female short and normal. Venation: *Rs* shorter than the nearly longitudinal R_{2+3+4} ; vein R_3 suberect; petiole of cell R_5 from about one and one-half to more than twice the basal section of M_{1+2} ; *m-cu* at or before the fork of *M*; apical fusion of Cu_1 and 1st *A* short.

Abdomen reddish brown to darker, the terminal three or four segments in male dark brown to brownish black; in female, the subterminal segments similarly darkened; valves of ovipositor horn-colored.

Holotype, ♂, Luabo, Portuguese East Africa, February 1, 1957 (Pamela J. Usher). *Allotopotype*, ♀, March 18, 1957. *Paratopotypes*, 4 ♂ ♀, March 21—April 1, 1957.

I take great pleasure in dedicating this attractive fly to the collector, Mrs. Brian Stuckenberg (Pamela Usher), to whom I am indebted for several crane-flies of unusual interest from different parts of Mozambique. The most similar species is the Oriental-Australasian *Trentepohlia* (*Trentepohlia*) *trentepohlii* (Wiedemann), type of the genus, readily told from the present fly by the short costal fringe of the male, and in other characters. The only other regional species having a somewhat comparable long costal fringe is *T. (T.) exornata* Bergroth, readily told by the quite different pattern of the wings and in other features.

***Trentepohlia* (*Trentepohlia*) *leucophæa* n.sp. Fig. 6.**

Allied to *zambesiæ*; general coloration of mesonotum brownish yellow, praescutum darker brown medially in front, posterior sclerites yellowish white; femora brownish black except basally, tibiae with about the basal third brownish black, the remainder of tibiae and the basal three tarsal segments snowy white; wings greyish yellow, veins pale yellow, poorly defined against the ground; R_{3+4} less than twice R_2 .

Male. Length about 5 mm.; wing 5 mm.

Female. Length about 4.8—5 mm.; wing 5 mm.

Rostrum and maxillary palpi brownish black, labial palpi and remaining mouthparts yellow. Antennae black; flagellar segments long-oval to elongate, exceeding the verticils. Front and carinate anterior vertex brownish black, posterior vertex and occiput buffy.

Pronotum brown, paler laterally. Mesonotum brownish yellow, the praescutum dark brown on central part of anterior third; scutellum and postnotum yellowish white. Pleura obscure yellow, the sternopleurite darker. Halteres with stem whitened, knob moderately infuscated. Legs with coxae and trochanters yellow; femora brownish yellow basally, passing into brownish black; tibiae brownish black on about the basal third, the remainder snowy white; tarsi snowy white, the outer two segments darker. Wings (Fig. 6) greyish yellow, unpatterned; veins pale yellow, poorly defined against the

ground. Costal fringe relatively short; veins glabrous, distal section of R_5 with about three strong trichia. Venation: Sc short, Sc_1 ending before fork of R_s , the latter a trifle longer than basal section of R_5 or the fused $R_5 + M_{1+2}$; cell R_5 about twice its petiole; apical fusion of Cu_1 and 1st A extensive, as in the *gracilis* group.

Abdomen light brown, hypopygium more brownish yellow.

Holotype, ♂, Salisbury, Southern Rhodesia, January 2, 1957 (Smithers). *Allotopotype*, ♀, March 4, 1957. *Paratopotypes*, 4♂♀, March 3-8, 1957.

This fly is readily told from *Trentepohlia* (*Trentepohlia*) *zambesiae* (Alexander) by the pattern of the legs and by the pale wing veins. *T. (T.) gracilis* (Enderlein), of Madagascar and southeastern Africa, is quite distinct in the elongate abdomen and in the shape and venation of the wings, including the very deep cell R_5 , which is approximately five or six times its petiole.

Gonomyia (Idiocera) mashonensis n.sp. Figs. 7 and 13.

Size medium (wing of male 6 mm.); mesonotum brown, ventral pleurites pale yellow; legs yellow, the tips of femora weakly darkened, of the tibiae more evidently blackened; wings with a restricted dark pattern; costal fringe of male long; Sc short; male hypopygium with the apex of basistyle produced into a flattened dark colored blade; three dististyles, the outer arm of the outer style long and slender; tips of inner styli acutely pointed; aedeagus suddenly narrowed at apex.

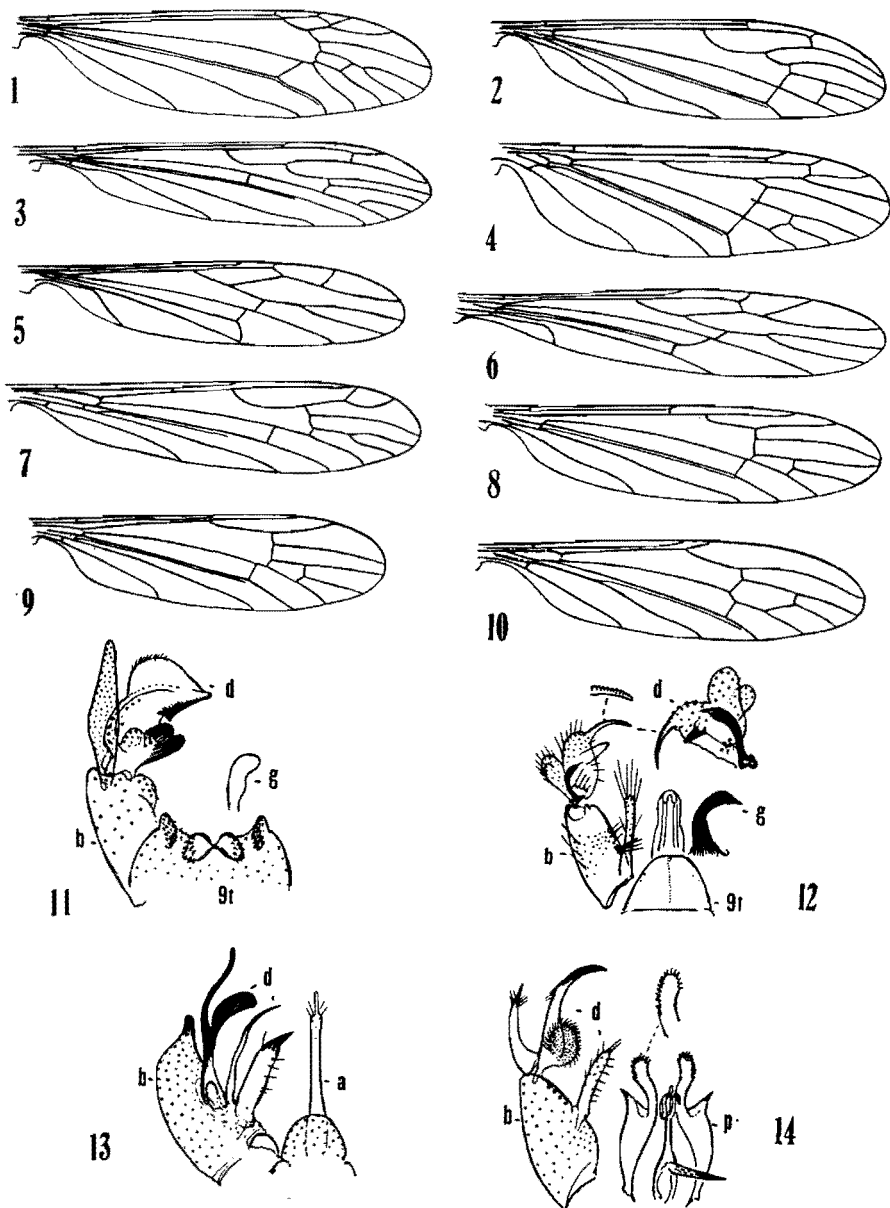
Male. Length about 6 mm.; wing 6 mm.

Female. Length about 7.5—8 mm.; wing 7—7.3 mm.

Rostrum light grey above, darker on sides; palpi black. Antennae with basal segments pale, flagellum brownish black, the proximal ends of the more

EXPLANATION OF FIGURES.

- Fig. 1. *Nephrotoma smithersiana* n.sp.; venation.
 - Fig. 2. *Limonia* (*Limonia*) *hovamendica makalaka* n. subsp.; venation.
 - Fig. 3. *Orimarga* (*Orimarga*) *mashonensis* n.sp.; venation.
 - Fig. 4. *Hexatoma* (*Eriocera*) *shawanoensis* n.sp.; venation.
 - Fig. 5. *Trentepohlia* (*Trentepohlia*) *pamela* n.sp.; venation.
 - Fig. 6. *Trentepohlia* (*Trentepohlia*) *leucopæa* n.sp.; venation.
 - Fig. 7. *Gonomyia* (*Idiocera*) *mashonensis* n.sp.; venation.
 - Fig. 8. *Gonomyia* (*Lipophleps*) *mashona* n.sp.; venation.
 - Fig. 9. *Gonomyia* (*Lipophleps*) *fimbriata* n.sp.; venation.
 - Fig. 10. *Toxorhina* (*Toxorhina*) *mashona* n.sp.; venation.
 - Fig. 11. *Nephrotoma smithersiana* n.sp.; male hypopygium.
 - Fig. 12. *Limonia* (*Limonia*) *hovamendica makalaka* n. subsp.; male hypopygium.
 - Fig. 13. *Gonomyia* (*Idiocera*) *mashonensis* n.sp.; male hypopygium.
 - Fig. 14. *Gonomyia* (*Lipophleps*) *fimbriata* n.sp.; male hypopygium.
- (Symbols: a, aedeagus; b basistyle; d, dististyle; g, gonapophysis; p, phallosome; t, tergite).



basal segments somewhat paler; outer flagellar segments elongate, a trifle shorter than the verticils. Head with anterior vertex and anterior orbits whitish grey, the remainder of head dark grey, with long whitish setae.

Pronotum variegated buffy and dark brown. Mesonotal praescutum and scutum almost uniformly brown, the former with indications of a darker central stripe; pseudosutural foveae elongate, dark reddish brown, the humeral region restrictedly buffy; scutellum darkened medially, the sides yellow; mediotergite dark brown, sparsely pruinose. Pleura darkened dorsally and less evidently on the ventral sternopleurite, the dorsal sternopleurite and posterior sclerites of pleura pale yellow. Halteres dusky. Legs with coxae and trochanters yellow; femora yellow, weakly more darkened at or near tips; tibiae yellow, tips narrowly but conspicuously blackened; basitarsi brown, the tips and remainder of tarsi. Wings (Fig. 7) very weakly suffused with brown, prearcular and costal fields clear light yellow; a very restricted brown pattern, including spots at origin of *Rs*, cord, *m-cu*, a small spot indicating the inner end of the stigma, and darkenings near outer ends of cells R_3 and R_4 , the outer ends of these latter cells light yellow; veins yellow, brown in the patterned areas: Costal fringe of male long and conspicuous. Venation: *Sc* short, Sc_1 ending opposite the fork of *Rs*, Sc_2 far retracted, Sc_1 alone exceeding R_{2+3+4} ; vein R_3 oblique, R_4 strongly curved, especially at outer end, cell R_3 at margin less extensive than cell R_4 ; cell 2nd M_2 longer than its petiole; *m-cu* about one and one-half times its length before the fork of *M*.

Abdominal tergites dark brown, sternites and hypopygial basistyles pale. Male hypopygium (Fig. 13) with the apex of basistyle, *b*, produced into a compressed-flattened dark colored blade. Three dististyles, *d*, the outer longest, deeply forked at near midlength, the outer arm long and slender, the shorter inner arm a compressed blade, its tip obtuse; intermediate style about as long as outer arm of the outer style, a simple slender rod that narrows into a long acute spine; inner style nearly as long, a flattened parallel-sided rod, the tip blackened, extended into an acute point, inner margin with erect setae. Aedeagus, *a*, pale, slender, abruptly narrowed at tip.

Holotype, ♂, Salisbury, Southern Rhodesia, April 9, 1957 (Smithers). *Allotopotype*, ♀, September 5, 1956. *Paratopotype*, ♀, March 8, 1957.

The closest regional ally is *Gonomyia* (*Idiocera*) *glabriapicalis* Alexander, likewise from Salisbury, readily distinguished by the quite distinct male hypopygium, particularly the basistyle and dististyles. It is possible that the females assigned to the present fly do not belong with this species.

***Gonomyia* (*Lipophleps*) *mashona* n.sp. Fig. 8.**

Size relatively large (wing of female 4.8 mm.); general coloration of mesonotal praescutum greyish brown, paler laterally, with a darker median vitta on anterior half; posterior sclerites of notum yellow; pleura with a whitish longitudinal stripe that is narrowly bordered both above and below with brown; knobs of halteres weakly darkened; legs pale brown, outer tarsal

segments dark brown; wings long, tinged with brown, costal border light yellow, stigma pale brown; *Sc* short; cell *R*₃ lacking; abdominal tergites brownish black, posterior and lateral borders of the segments narrowly yellowish white, sternites brownish black.

Female. Length about 5.2 mm.; wing 4.8 mm.

Rostrum and palpi black. Antennae with the scape reddish brown, lined whitish above; flagellum black, segments long, a little shorter than the verticils. Head yellow; center of vertex restrictedly darkened. Pronotum and pretergites very pale yellow, the scutellum narrowly more darkened medially. Mesonotal praescutum greyish brown, with a vague darker median vitta on anterior half, humeral and lateral regions paler; pseudosutural foveae reddish; scutal lobes brown, posterior callosities yellow; scutellum yellow posteriorly, the base infuscated; postnotum chiefly yellow. Pleura obscure yellow or brownish yellow dorsally, including the dorsopleural membrane, with a broad whitish longitudinal stripe extending from the fore coxae to the base of abdomen, narrowly bordered both above and below by darker brown; ventral sternopleurite and sternum obscure yellow. Halteres with stem yellow, knob weakly darkened. Legs with coxae pale yellow, fore pair whitened, as described; trochanters obscure yellow; remainder of legs pale brown or brownish yellow, outer tarsal segments passing into dark brown. Wings (Fig. 8) relatively long and narrow, weakly tinged with brown, prearcular and costal regions light yellow; stigma pale brown, a little darker than the ground; veins pale brown, more yellowed in the brightened fields. Venation: *Sc* short, *Sc*₁ ending a distance before the origin of *Rs* equal to about two-thirds the latter; *Rs* relatively short, about two-thirds its anterior branch; basal section of *R*₅ longer than *m*; vein *M*₃₊₄ a trifle longer than *M*₄; *m-cu* immediately before the fork of *M*.

Abdominal tergites brownish black, the posterior borders of the segments narrowly yellowish white, the lateral margins still more narrowly so; sternites with posterior borders very narrowly to scarcely brightened. Ovipositor with genital shield reddish brown, darker basally, cerci and hypovalvae blackened, the tips of the former more reddened.

Holotype, ♀, Salisbury, Southern Rhodesia, December 31, 1956 (Smithers).

The most similar described species is *Gonomyia* (*Lipophleps*) *calyce* Alexander, of Uganda, which differs in slight but apparently significant features of coloration and venation.

***Gonomyia* (*Lipophleps*) *fimbriata* n.sp. Figs. 9 and 14.**

Belongs to the *pilifera* group; male hypopygium with the outer dististyle short, gently curved to the acute tip; inner blades of the gonapophyses unusually broad, terminating in pale membrane that is conspicuously fimbriate.

Male. Length about 3.5 mm.; wing 3.5 mm.

Rostrum dark brown; palpi black. Antennae with scape darkened below, yellow above, pedicel yellow, flagellum black; flagellar segments long-cylindrical, with very long verticils. Head yellowish white, center of posterior vertex brown.

Pronotum and pretergites yellowish white. Mesonotal praescutum almost covered by three brownish grey stripes, interspaces faintly indicated; humeral region vaguely brightened, lateral border yellow; pseudosutural foveae reddish; scutal lobes brownish grey, central area yellowed, with a further darkened median vitta; scutellum yellow, with a brownish grey central spot at base; mediotergite yellow, the posterior third dark brown, pleurotergite light yellow. Pleura with the dorsal sclerites obscure yellow, vaguely lined with brown streaks, beneath which is a broad and conspicuous yellowish white longitudinal stripe, extending from and including the fore coxae, reaching the abdomen behind; ventral sternopleurite, meron and lower metapleura dark brown, sparsely pruinose. Halteres with stem yellowish white, knob brown, narrowly lined with white. Legs with coxae yellowish white; trochanters light yellow; femora brownish yellow, clearer basally, with a broad brown subterminal ring, with a narrower and vague similar area at near midlength; tibiae and basitarsi obscure yellow, tips narrowly darkened, remainder of tarsi brownish black.. Wings (Fig. 9) whitish subhyaline, extensively clouded with pale brown areas in the outer and posterior cells; small darker areas at fork of *Sc* and origin of *Rs*, tip of *R*₃, along cord and over outer end of cell 1st *M*₂; stigma much paler brown; veins very pale brown, darker in the patterned areas. Venation: *Sc*₁ ending just beyond origin of *Rs*, *Sc*₂ close to its tip; *Rs* long, nearly equal to its anterior branch; cell *R*₃ at margin nearly three times *R*₂; *m-cu* about one-half its length before fork of *M*.

Abdominal segments bicolored, dark brown, with about the posterior third pale; hypopygium brownish yellow. Male hypopygium (Fig. 14) of the *pilifera* type (three dististyles, the intermediate one with a large pale cushion at base, inner style lying more cephalad than the others; phallosome a large depressed-flattened plate, the apophyses produced into pale fimbriate blades). Outer dististyle, *d*, short, broad-based, gently narrowed and curved into a black spine, at base of latter with a dense brush of setae; intermediate style about one-half longer, stouter, the basal cushion large and conspicuous, on outer margin beyond midlength with a small blackened point and a few setae; inner style elongate, fasciculate setae yellow, the others black, erect. Phallosome, *p*, with the outer spines of the apophyses appearing as short black points; inner blades unusually stout, the apices broadly hyaline and with numerous fimbriations; paired outer hooks conspicuous; basal spine long and conspicuous, blackened.

Holotype, ♂, Salisbury, Southern Rhodesia, January 20, 1957 (Smithers).

The most similar species is *Gonomyia (Lipophleps) ornatipes* (Brunetti), of South India, which I consider to be distinct from *G. (L.) pilifera* (De Meijere), though closely related. The African species obviously is allied but

distinct in the details of structure, especially the outer dististyle and the phallosome.

Toxorhina (Toxorhina) mashona n.sp. Fig. 10.

General coloration of thorax almost uniform brownish black or very dark brownish grey, without pattern; knobs of halteres medium brown; legs black, femoral bases obscure brownish yellow; wings with a strong dusky tinge, prearcular field and proximal part of costal area more yellowed; *m-cu* some distance beyond fork of *M*.

Female. Length, excluding rostrum, about 5.5—6 mm.; wing 4.5—4.8 mm.; rostrum about 2.2—2.8 mm.

Rostrum brownish black. Antennae black throughout. Head brownish grey; anterior vertex broad, corniculus developed as a low tubercle.

Cervical region and pronotum black. Mesonotal praescutum and scutum almost uniform brownish black or very dark brownish grey, without pattern; scutellum and postnotum dark grey. Pleura black, very sparsely pruinose. Halteres with stem yellow, knob medium brown. Legs with coxae brownish grey; trochanters yellow; femora obscure brownish yellow basally, passing into black; remainder of legs black. Wings (Fig. 10) with a strong dusky tinge, prearcular field and proximal part of costal area more yellowed; veins brown. Venation: *m-cu* some distance beyond fork of *M*, in cases to more than one-half its length.

Abdomen, including ovipositor, brownish black.

Holotype, ♀, Salisbury, Southern Rhodesia, January 20, 1957 (Smithers). *Paratopotypes*, 2 ♀ ♀, January 19, 1957.

The only other regional species of the subgenus is *Toxorhina (Toxorhina) cuthbertsoni* Alexander, readily told by the clear wings with *m-cu* at or before the fork of *M*.